

Trip Report  
St Catherine Creek NWR  
August 17, 1999

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John Forester and Cedric Doolittle of the Baton Rouge FRO visited St Catherine Creek National Wildlife Refuge August 17 and 18 to sample fish populations in various water bodies on the refuge. Lee Johnson, a refuge co-op student from Jackson State University, took part in sample collection. Samples were collected with an electro shocking boat, using pulsed DC current.

#### Gilliard Lake

The first samples were taken in Gilliard Lake, a cypress-studded, shallow lake affected by Mississippi River backwaters. In 1800 seconds (half hour) of shocking, seven crappie and two bass were captured. Many carp, buffalo and gar were observed as well. This picturesque lake of approximately 600 acres was 2.5 to 3 feet deep and could be enhanced as a fishery with an increased water level. Retaining water depths of at least six feet once backwaters have receded is a pretty sure bet that sport fish, mainly crappie and catfish, entering with rising water levels will remain in these deeper depressions rather than return to the river with receding waters. Populations of these two highly sought-after game fish will often be concentrated in greater density than could normally be produced in a similar sized, fertile lake, especially when the contributing river is as rich in fish as the Mississippi.

Holding deeper water would inundate the access road to the launch. However, this gravel road bed would provide excellent spawning habitat and would allow placement of a launch site near deeper water.

#### Salt Lake

The second area visited was a 200-acre backwater lake in closer proximity to the Mississippi River than Gilliard. The lengthy access road is clay and difficult to maintain. Plans call for upgrading with gravel. Water depth of Salt lake was six to seven feet in the center with scattered shoreline bushes hanging over and into the water. Occasional fallen timber and other woody debris offered excellent cover. Approximately 30-40 white pelicans were scattered throughout the lake.

The fish population of this waterbody was something to behold. Eighteen large (3/4-1.5 lb+) crappie were captured at the first bush about twenty feet from the launch site. Approximately the same number was captured at the second overhanging bush 30 yards down the bank along with four bass up to 2.5 pounds. We then turned the boat out to the middle of this 60 yd wide, elongated lake and shocked in open water and continued to roll up large crappie and bass. Total shocking time was less than twenty minutes and we observed over 100 crappie and bass. This lake could support considerable fishing pressure each year and be refurbished with fish from the river at each overflow.

**RECEIVED**

SEP 29 1999

ST. CATHERINE CREEK  
NATIONAL WILDLIFE REFUGE

### Butler Lake

Butler lake, another backwater lake of approximately 200 acres, could not be sampled due to wash-out of a retaining dike and subsequent shallow water. Rehabilitation of the dike to hold adequate depths (6-7'+) is planned. This lake and surrounding area was electro fished in March, 1999 when the Mississippi River had inundated several thousand acres of refuge. Buffalo and shad were the most numerous fish species along with gar, carp, mullet, and paddlefish. Sport fish were out of reach, probably in deeper or more inaccessible areas.

### Ladies' Lake

This water body, near the refuge workshop, was evaluated as a possible location for special fishing events. It appeared to be about an acre in size with steep, vegetated banks and low fertility. Of the roughly 30 largemouth bass observed, three were 11 to 13 inches and thin. The rest were three to four inches long and thin as well. No bluegill were seen though a few hybrid crosses with green sunfish, and some warmouth and dollar sunfish were present. A large blue catfish of twenty pounds was removed from the pond. This fish plus another of the same size recently caught from the pond probably had something to do with the paucity of fish. Trying to maintain a balanced fish population in such a small, easily accessible pond is quite difficult unless a stringent, enforced creel restriction on size and/or numbers is implemented. Time and effort in such an endeavor is not recommended. However, a small pond could be constructed near the shop, or perhaps further towards the river, that was subject to inundation by the river and closed to fishing except special events. The Baton Rouge FRO could sample the pond a month or so prior to the event and, if needed, add a hundred or two large crappie captured from other water bodies on the refuge. Having sunken trees or other large (6-10") diameter stob in 5- foot water depth within poles length from the bank where fish would concentrate would make for some real fishing excitement. Any fish not removed during the spring/summer events would have a means of escapement during the next overflow, if the food supply (mainly shad) had been depleted.

### Recommendations

1. Through dike construction or otherwise, hold residual water depths of at least six feet in Gilliard lake, adding a boat launch when feasible.
2. Continue refurbishment and graveling of access road to Salt Lake. Due to the steep bank, a boat launch is *not recommended*. Boats can be carried in pick-up beds or on car-top carriers, which will contribute to a more serene fishing experience and perhaps lessen road degradation.
3. Through consultation with the NRCS or other appropriate body, rehabilitate the retaining dike at Butler's Lake to hold , if possible, seven to eight feet of water once the river has receded. The boat launch appeared adequate.
4. Not much energy should be spent on ladies' Lake if other recommendations are followed.



Three hundred bluegill/ redear sunfish will be delivered from our Private John Allen NFH in Tupelo this fall to provide some forage for the bass. A fourteen-inch minimum length limit should be enacted on bass if you felt like it was important to develop the fishery of this lake but I don't see the need if the special-use lake (i.e. one to two acres, within flood plain, with 6' retained depth, 2:1 slope, brush as described) is developed for special events. I highly recommend this and would make every effort to prepare the fish population for some memorable fishing experience for youngsters.

5. Continue to provide access to Swamp Lake, which we will sample on our next trip, probably this fall.

6. At the risk of sounding ungrateful for all that is happening for the fishing public at St. Catherine Creek NWR, consider developing a crawfishing/fishing area in the previously farmed area subject to yearly inundation.

Jim,

Maury ~~SA~~  
File -

Salt Lake is excellent w/ 6-7'  
of water. Croppie + bass plant: Ad.

Gillard Lake is pretty but depth  
less than 3' a deepest area, 6-7'  
when bract water leaves would be ideal, if  
possible.

Sister's Pond - not worth much as is.

Plenty of 5-7" bass w/ 3 or 4 bass up  
to 13" but stinking. No bluegill seen, though  
a hybrid cross w/ green sunfish is present along  
with some other sunfish like warmouth (goggle eye)  
but very few. One large catfish (blue) in  
cooler behind office. We removed it from pond,  
not desirable unless you have plenty of bluegill or  
other prey. Will send official report.

JoL



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COMPILED IN THE DIVISION OF REALTY  
FROM SURVEYS BY U. S. G. S.

ATLANTA, GEORGIA JANUARY, 1994

LOUISIANA MERIDIAN, LOUISIANA  
WASHINGTON MERIDIAN, MISSISSIPPI

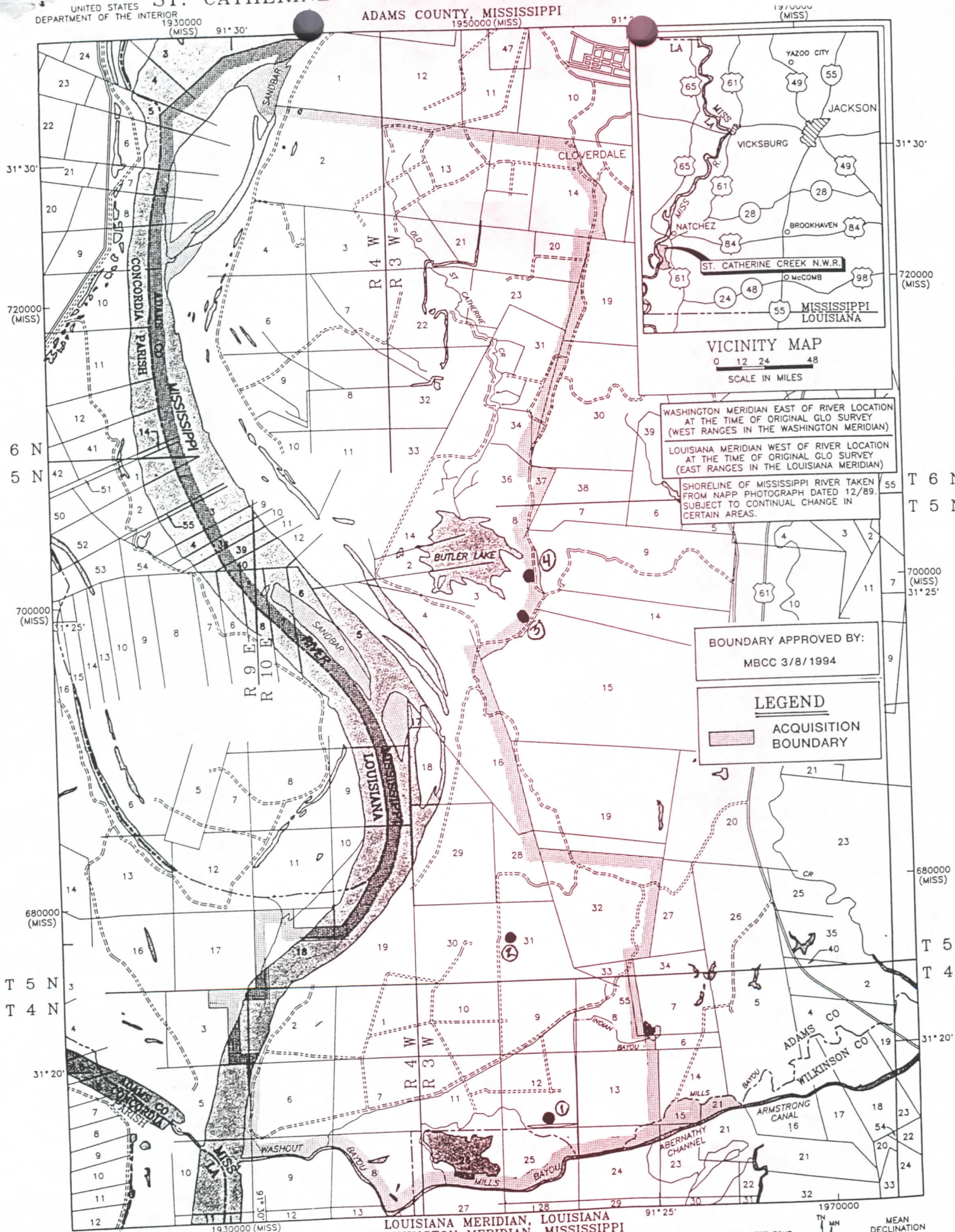
0 4000 8000 12000 16000 FEET  
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NAD83, MISS WEST ZONE

1970000  
TN  
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MEAN DECLINATION  
1994

4R MISS II



WASHINGTON MERIDIAN EAST OF RIVER LOCATION  
AT THE TIME OF ORIGINAL GLO SURVEY  
(WEST RANGES IN THE WASHINGTON MERIDIAN)

LOUISIANA MERIDIAN WEST OF RIVER LOCATION  
AT THE TIME OF ORIGINAL GLO SURVEY  
(EAST RANGES IN THE LOUISIANA MERIDIAN)

SHORELINE OF MISSISSIPPI RIVER TAKEN  
FROM NAPP PHOTOGRAPH DATED 12/89.  
SUBJECT TO CONTINUAL CHANGE IN  
CERTAIN AREAS.

BOUNDARY APPROVED BY:  
MBCC 3/8/1994

**LEGEND**  
ACQUISITION  
BOUNDARY

**VICINITY MAP**  
0 12 24 48  
SCALE IN MILES

Collection #111

Buck Island 1:24,000

Acc # 4497

date entered in general.dbf: \_\_\_\_\_

USM ICHTHYOLOGY: FIELD DATA FORM-General Information  
(last modified 10-27-90)

DATE 31 Aug 95; TIME 1100-1147; FIELD NUMBER WTS 99-020.

COLLECTORS WTS Lack, RE Weitzell.

STATE MS. COUNTY Adams.

TOWNSHIP/RANGE/SECT. T4N, R3W, Sec 12.

SYSTEM Homesite. WATER BODY Borrow Pit.

EXACT LOCATION trib / washline to Mills Bayou; 6 km.

E of Washout Bayou confluence with Mississippi River

STREAM ORDER \_\_\_\_\_; UPSTREAM DRAINAGE AREA \_\_\_\_\_.

STREAM WIDTH \_\_\_\_\_; WATER TEMP. \_\_\_\_\_. D.OXYGEN \_\_\_\_\_.

CONDUCTIVITY \_\_\_\_\_; FTU (#) \_\_\_\_\_; PH \_\_\_\_\_.

GENERAL BANK SHAPE FOR OVERALL SITE: \_\_\_\_\_.

SURROUNDING VEGETATION \_\_\_\_\_.

COLLECTING GEAR \_\_\_\_\_.

QUAD. NAME \_\_\_\_\_.

SKETCH 005 - get time

Mussel collection

{ 648013 - utmy -  
3465909 utmy -

irrigation ditch (borrow pit) on S of levee  
(400 yds W of new ATV trail)



// Collected #2 //

Buck Island 11:24:00

Acc# 4487

date entered in general.dbf: \_\_\_\_\_

USM ICHTHYOLOGY: FIELD DATA FORM - General Information  
(last modified 10-27-90)

DATE 31 Aug 99; TIME 12:00-12:20; FIELD NUMBER WTS99-021

COLLECTORS WTSack, RE Weitzel

STATE MS COUNTY Adams

TOWNSHIP/RANGE/SECT. T5N, R3W Sec 31

SYSTEM MS River WATER BODY impoundment

EXACT LOCATION Waterfall impoundment #1, 2.5 km NW  
of "The Swamp"

STREAM ORDER \_\_\_\_\_; UPSTREAM DRAINAGE AREA \_\_\_\_\_

STREAM WIDTH \_\_\_\_\_; WATER TEMP. \_\_\_\_\_ D.OXYGEN \_\_\_\_\_

CONDUCTIVITY \_\_\_\_\_; FTU (#) \_\_\_\_\_; PH \_\_\_\_\_

GENERAL BANK SHAPE FOR OVERALL SITE: \_\_\_\_\_

SURROUNDING VEGETATION \_\_\_\_\_

COLLECTING GEAR Mussel collection

QUAD. NAME \_\_\_\_\_

SKETCH 006

Waterfall impoundment #1, NW of "The Swamp"

coordinates { utmx - 647530  
utm y - 3469786

Mussels

FIELD COLLECTION DATA RECORD (Aquatic)

Acc 4497

COLLECTION NUMBER: WTS 99-021

Collector(s): W.T. Sack, R.E. Wentzell

Date: 3 AUG 1999

Specific Locale: Waterbody impoundment #1, 2.5 km NW of the SWAMP, St. Catherine  
Creek National Wildlife Refuge

Sect.: Sec 31

Twp.: T5N R 3W

Co.: Adams

State: MS

	CATALOG NUMBER	TOTAL NO. SPEC.	SPECIES	I	II	SUB- FOSSIL	REMARKS
				LIVE	DEAD		
1	4738	29	<i>Pygospio grandis</i>		29		
2	4739	1	<i>Anodonta suborbiculata</i>		1		
3	4740	15	<i>Utterbackia imbecillis</i>		15		
4	4741	25	<i>Toxolasma tenuisensis</i>		25		
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IDENTIFIED BY: \_\_\_\_\_

MISSISSIPPI MUSEUM OF NATURAL SCIENCE



Collection #3

Siblay 1:24,000

Acc # 4487

date entered in general.dbf: \_\_\_\_\_

USM ICHTHYOLOGY: FIELD DATA FORM-General Information  
(last modified 10-27-90)

DATE 31 Aug 91; TIME 1300-1415; FIELD NUMBER WTS99-022

COLLECTORS WTS/ab RE Wentzell

STATE MS COUNTY Adams

TOWNSHIP/RANGE/SECT. TSN, R3W, Sec 03/15

SYSTEM trib to Old St. Johns Creek WATER BODY Spring Seep

EXACT LOCATION Cabin Road 0.6 km SE of  
Butler Lake

STREAM ORDER \_\_\_\_\_; UPSTREAM DRAINAGE AREA \_\_\_\_\_

STREAM WIDTH \_\_\_\_\_; WATER TEMP. \_\_\_\_\_ D.OXYGEN \_\_\_\_\_

CONDUCTIVITY \_\_\_\_\_; FTU (#) \_\_\_\_\_; PH \_\_\_\_\_

GENERAL BANK SHAPE FOR OVERALL SITE: \_\_\_\_\_

SURROUNDING VEGETATION \_\_\_\_\_

COLLECTING GEAR \_\_\_\_\_

QUAD. NAME \_\_\_\_\_

SKETCH 207

Cabin Road - spring #1 - upstream  
of Butler Lake

E. Aspigone  
F. chrysolis

X - 648206

Y - 3476348

Acc #4487

Mississippi Museum of Natural Science  
Ichthyology Collection

Page 1 of 1

FIELD NUMBER: WTS99-022

Date entered in species.dbf: 18 September 1999 by: WTS

good find! \*

Species	Individuals	Museum Number	Size range (mm)
• 1. <u>Elasoma zonatum</u>	<u>11</u>	<u>23476</u>	<u>17.2</u> to <u>23.5</u>
• 2. <u>Fundulus chrysotus</u>	<u>3</u>	<u>23477</u>	<u>25.3</u> to <u>27.7</u>
• 3. <u>Gambusia affinis</u>	<u>18</u>	<u>23478</u>	<u>10.1</u> to <u>28.2</u>
• 4. <u>Aphredoderus sayanus</u>	<u>6</u>	<u>23479</u>	<u>34.9</u> to <u>41.6</u>
• 5. <u>Notemigonus crysoleucas</u>	<u>4</u>	<u>23480</u>	<u>20.4</u> to <u>24.2</u>
• 6. <u>Etheostoma proclivum</u>	<u>33</u>	<u>23481</u>	<u>19.1</u> to <u>24.1</u>
• 7. <u>Lepomis miniatus</u>	<u>2</u>	<u>23482</u>	<u>19.6</u> to <u>23.8</u>
• 8. <u>Etheostoma asprigene</u>	<u>2</u>	<u>23483</u>	<u>37.3</u> to <u>44.8</u>
9. _____	_____	_____	_____ to _____
10. _____	_____	_____	_____ to _____
11. _____	_____	_____	_____ to _____
12. _____	_____	_____	_____ to _____
13. _____	_____	_____	_____ to _____
14. _____	_____	_____	_____ to _____
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16. _____	_____	_____	_____ to _____
17. _____	_____	_____	_____ to _____
18. _____	_____	_____	_____ to _____
19. _____	_____	_____	_____ to _____
20. _____	_____	_____	_____ to _____

ID by: WTS/ach

Date: 9 September 1999



Collection #4

Saturday 1:24.000

Acct# 4407 ✓

date entered in general.dbf: \_\_\_\_\_

USM ICHTHYOLOGY: FIELD DATA FORM-General Information  
(last modified 10-27-90)

DATE 31 Aug 99; TIME 1430-1453; FIELD NUMBER WTS99-023

COLLECTORS WTSlach RE Weitzell

STATE MS COUNTY Alcorn

TOWNSHIP/RANGE/SECT. TSN, R 3W, Sec 08

SYSTEM W/Old St Catfish Creek WATER BODY Spring Swamp

EXACT LOCATION Cabin Road 0.5 km due E  
of Butler Lake,

STREAM ORDER \_\_\_\_\_; UPSTREAM DRAINAGE AREA \_\_\_\_\_

STREAM WIDTH \_\_\_\_\_; WATER TEMP. \_\_\_\_\_ D.OXYGEN \_\_\_\_\_

CONDUCTIVITY \_\_\_\_\_; FTU (# ) \_\_\_\_\_; PH \_\_\_\_\_

GENERAL BANK SHAPE FOR OVERALL SITE: \_\_\_\_\_

SURROUNDING VEGETATION \_\_\_\_\_

COLLECTING GEAR \_\_\_\_\_

QUAD. NAME \_\_\_\_\_

SKETCH 008

Cabin Road Spring #2

*E. chrysola*

*E. asperum* - 606

*Luxilus*

*Coluber constrictor*  
*Agkistrodon*

X - 648388

X - 3477271

Acc # 4487

Mississippi Museum of Natural Science  
Ichthyology CollectionPage 1 of 1FIELD NUMBER: WTS99-023Date entered in species dbf: 19 September 1999 by: WTS

Species	Individuals	Museum Number	Size range (mm)
• 1. <u>Centrarchus macropterus</u>	<u>1</u>	<u>23484</u>	<u>91.6</u> to <u>   </u>
• 2. <u>Lepomis gulosus</u>	<u>4</u>	<u>23485</u>	<u>34.9</u> to <u>50.6</u>
• 3. <u>Lepomis cyanellus</u>	<u>12</u>	<u>23486</u>	<u>44.3</u> to <u>97.1</u>
• 4. <u>Lepomis miniatus</u>	<u>2</u>	<u>23487</u>	<u>60.9</u> to <u>75.5</u>
• 5. <u>Lepomis megalotis</u>	<u>2</u>	<u>23488</u>	<u>53.7</u> to <u>65.6</u>
• 6. <u>Ameiurus natalis</u>	<u>1</u>	<u>23489</u>	<u>56.6</u> to <u>   </u>
• 7. <u>Luxilus chrysocephalus</u>	<u>1</u>	<u>23490</u>	<u>98.6</u> to <u>   </u>
• 8. <u>Notemigonus crysoleucas</u>	<u>1</u>	<u>23491</u>	<u>72.0</u> to <u>   </u>
• 9. <u>Fundulus chrysotus</u>	<u>2</u>	<u>23492</u>	<u>48.7</u> to <u>49.4</u>
• 10. <u>Ecox americanus</u>	<u>1</u>	<u>23493</u>	<u>136.1</u> to <u>   </u>
• 11. <u>Gambusia affinis</u>	<u>82</u>	<u>23494</u>	<u>19.5</u> to <u>42.9</u>
• 12. <u>Etheostoma proclivare</u>	<u>19</u>	<u>23495</u>	<u>21.4</u> to <u>32.6</u>
• 13. <u>Etheostoma gracile</u>	<u>1</u>	<u>23496</u>	<u>32.9</u> to <u>   </u>
• 14. <u>Etheostoma asprigene</u>	<u>64</u>	<u>23497</u>	<u>29.6</u> to <u>52.5</u>
15. <u>                                  </u>	<u>   </u>	<u>   </u>	<u>   </u> to <u>   </u>
16. <u>                                  </u>	<u>   </u>	<u>   </u>	<u>   </u> to <u>   </u>
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19. <u>                                  </u>	<u>   </u>	<u>   </u>	<u>   </u> to <u>   </u>
20. <u>                                  </u>	<u>   </u>	<u>   </u>	<u>   </u> to <u>   </u>

Good find! \*ID by: WTSDate: 9 September 1999